

REMARKS

Claims in the case are 1-5, 9-10, 12-15 and 19-22.

Claims 1-5, 9-10, 12-15 and 19-22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over EP 0 728 811 (**Maruyama et al**) in view of United States Patent No. 4,937,285 (**Wittmann '285**), United States Patent No.5,126,404 (**Eckel et al**), or United States Patent No. 5,552,465 (**Wittmann '465**). This rejection is respectfully traversed with regard to the following remarks and the declaration included herewith.

The thermoplastic molding composition of Applicants' claims comprises: (A) an aromatic polycarbonate and/or polyester carbonate; (B) a graft polymer prepared by means of a graft polymerization in the presence of a redox initiator system comprising (i) an organic hydroperoxide and (ii) ascorbic acid (the graft polymerization having a grafting yield of > 60 wt.%); (C) optionally a thermoplastic vinyl (co)polymer and/or polyalkylene terephthalate; (D) a phosphazene selected from those represented by formulas Ia and/or Ib (see Claim 1); and (E) optionally a fluorinated polyolefin. Thermoplastic molding compositions according to Applicants' present claims provide a combination of excellent flame resistance coupled with improved mechanical properties, as compared to compositions comprising graft polymers prepared using a different initiator system (i.e., a non-redox initiator system) with either phosphazene or phosphate flame retardants.

Maruyama et al disclose thermoplastic resin compositions comprising an aromatic polycarbonate, a graft copolymer and a phosphazene (abstract).

Maruyama et al do not disclose, teach or suggest preparing the graft copolymer component of their composition by means of a redox initiator system comprising an organic hydroperoxide and ascorbic acid. Further, Maruyama et al do not disclose, teach or suggest the grafting yield of the graft copolymer of their compositions. The graft copolymer of Maruyama et al's examples is prepared using cumene hydroperoxide in the absence of ascorbic acid (page 5, line 56 - page 6, line 7).

Wittmann '285 disclose compositions comprising aromatic polycarbonates and graft polymers (abstract). The graft polymers of Wittmann '285 are prepared using an initiator system which includes an organic hydroperoxide and ascorbic acid

(column 2, lines 11-22). The compositions of Wittmann '285 are further disclosed as optionally including additives, such as flame retardants (column 11, lines 41-47). However, the flame retardants of Wittmann '285 are not further described. The compositions of Wittmann '285 are disclosed and stressed as possessing improved petroleum resistance (column 4, lines 20-29).

Eckel et al disclose thermoplastic molding compositions comprising a polycarbonate based on substituted dihydroxydiphenyl cycloalkanes, and a graft polymer (abstract). The graft polymer of Eckel et al is disclosed as being prepared using an initiator system which includes an organic hydroperoxide and ascorbic acid (column 1, lines 11-37). The compositions of Eckel et al are disclosed as optionally including additives, such as flameproofing agents (column 13, lines 13-18). However, the optional flameproofing agents of Eckel et al's compositions are not further described.

Wittmann '285, Wittmann '465 and Eckel et al each disclose compositions comprising aromatic polycarbonates, graft polymers prepared by means of a redox system comprising organic hydroperoxide and ascorbic acid, and flameproofing agents. However, Wittmann '285, Wittmann '465 and Eckel et al, either alone or in combination, provide no disclosure, teaching or suggestion as to selecting their flameproofing agents from phosphazenes. Wittmann '285 and Eckel et al provide no further disclosure or description of the flameproofing agents that may be used in their compositions, other than by use of the terms "flameproofing agents" or "flame retardants." Wittmann '465 disclose only a specific class of phosphorous compounds that may be included in their compositions. The specific class of phosphorous compounds of Wittmann '465 are not suggested as including phosphazenes.

In addition Wittmann '285, Wittmann '465 and Eckel et al, either alone or in combination, provide no disclosure, teaching or suggestion as to the improved physical properties that may be obtained by means of selecting the flameproofing agents of Applicants' claimed compositions from phosphazenes. Attention is directed to the declaration enclosed herewith in which a comparative composition prepared with triphenylphosphate as the flame retardant has reduced physical

properties relative to a composition according to Applicants' present claims (e.g., Example 1 on page 29 of the specification). The comparative example of the enclosed declaration has reduced notched impact resistance and softening point relative to Example 1 on page 29 of the specification.

The flame retardants of Maruyama et al's compositions are narrowly disclosed as being selected from phosphazenes. Maruyama et al teach away from the use of phosphorous compounds that are other than phosphazenes in their compositions (e.g., triphenyl phosphate, phosphoric esters and phosphoric ester oligomers). For example, Maruyama et al disclose that phosphoric esters typically have low melting points and poor compatibility with the resins into which they are incorporated. Such phosphoric ester containing resin compositions are further disclosed as suffering from various physical and processing deficiencies, such as reduced heat resistance and oozing of the phosphoric ester upon molding. See page 2, lines 12-41 of Maruyama et al. Further, Maruyama et al provide no disclosure, teaching or suggestion as to preparing the graft copolymers of their compositions using an organic hydroperoxide and ascorbic acid.

On page 2 of the Office Action, the Examiner argues that it would have been obvious to replace the graft polymer of the primary reference with that of the secondary references, regardless of other ingredients. In support his position, the Examiner goes on further to argue, on page 2 of the Office Action, that the physical properties of a molding composition "[do] not depend on and [are] not influenced by the choice of flame retardants." Applicants respectfully disagree, and wish to point out that the Examiner's position and comments are wholly unfounded and are in fact wrong. Attention is directed to the declaration included herewith and the comparative data contained therein. The comparative composition of the declaration is prepared with triphenylphosphate as the flame retardant, and has reduced physical properties relative to a composition according to Applicants' present claims (e.g., Example 1 on page 29 of the specification, which is prepared with a phosphazene flame retardant). In particular, the comparative example of the enclosed declaration has reduced notched impact resistance and softening point

relative to Example 1 on pag 29 of the specification. Clearly, the physical properties of a molded article can be influenced by the choice of flame retardants, contrary to the Examiner's wholly unfounded position.

Applicants wish to further point out that the Examiner's comments on page 2 of the Office Action amount to an admission on his part as to the impermissible use of hindsight in selectively combining the cited references to arrive at their claimed invention. "To imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher." W.L. Gore & Assoc. v. Garlock, Inc., 721 F.2d 1540, 1553 (Fed.Cir.1983). It is essential that "the decision-maker forget what he or she has been taught at trial about the claimed invention and cast the mind back to the time the invention was made ... to occupy the mind of one skilled in the art who is presented only with the references, and who is normally guided by the then-accepted wisdom in the art." *Id.* One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. In re Fine, 837 F.2d 1071, 1075 (CAFC, 1988).

On page 3 of the Office Action, the Examiner argues further that Maruyama et al's disclosure as to the optional presence of flame retardants other than phosphazenes is counter to Applicants' assertion as to Maruyama et al teaching away from use of phosphorous compounds that are other than phosphazenes in their compositions. Applicants respectfully disagree. Maruyama et al provide no other disclosure or suggestion as to what these optional flame retardants would be. In light of Maruyama et al's teaching away from the use of phosphates, one of ordinary skill in the art would not be reasonably expected to consider phosphates as an optional flame retardant that could be included in Maruyama et al's composition.

As such, it is respectfully submitted that none of the cited references provide the requisite motivation to combine their respective teachings in the manner

suggested in the Office Action of 13 February 2003. Maruyama et al teach away from the use of phosphoric acid esters as flame retardants, and Wittmann '465 specifically discloses the necessary presence of phosphoric acid esters as flame retardants in their compositions. Maruyama et al disclose and teach the necessary presence of phosphazene flame retardants in their compositions, while none of Wittmann '285, Eckel et al, and Wittmann '465 disclose or suggest the presence of or use of phosphazene flame retardants in their compositions.

As the Court of Appeals for the Federal Circuit has stated, there are three possible sources for motivation to combine references in a manner that would render the claims obvious. These are (1) the nature of the problem to be solved, (2) the teaching of the prior art, and (3) the knowledge of persons of ordinary skill in the art, In re Rouffet, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). The nature of the problem to be solved and the knowledge of persons of ordinary skill in the art are not present here and have not been relied upon in the rejection. As for the teaching of the prior art, the above discussion has established that none of the references relied upon in the rejection provide the requisite teaching, and certainly do not provide the motivation or suggestion to combine that is required by Court decisions.

Applicants wish to direct attention to the examples of their specification which are deemed to demonstrate unexpected results obtained with compositions according to their invention. In particular, the examples demonstrate the criticality of the graft yield of graft polymer B of Applicants' present composition being greater than 60 wt.%. The graft polymer Ba of Example 1 has a grafting yield of 89 wt.% (page 25, line 24), while the graft polymer Bb of Comparative Example 2 has a grafting yield of 55 wt.% (page 26, line 23). Further particularly, the examples demonstrate that thermoplastic compositions according to Applicants' invention provide excellent flame resistance in combination with improved notched impact strength, weld line strength and stress cracking resistance, relative to the comparative example. Such a combination of physical properties is desirable in, for example, thin-walled articles, such as thin-walled casing components (page 29, enumerated lines 4-9, below the table). The cited references, either alone or in


combination, provide n disclosure, sugg stion or teaching as to such a desirable combination of physical properties. As discussed previously herein with regard to the declaration enclosed herewith, comparative molding composition prepared with phosphate flame retardants have worse physical properties than those of Applicants' present claims which contain phosphazene flame retardants.

In light of the preceding comments, Applicants' claims are deemed to be unobvious and patentable over Maruyama et al in view of Wittmann '285, Eckel et al or Witmann '465. Reconsideration and withdrawal of this rejection is respectfully requested.

In light of the preceding remarks, Applicants' presently pending claims are deemed to define an invention that is unanticipated, unobvious and hence, patentable. Reconsideration of the rejections and allowance of all of the presently pending claims is respectfully requested.

Respectfully submitted,

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APPENDIX

Declaration containing comparative data.